

# Helena Chemical Site

Mission, Hidalgo County,  
Texas



# Overview

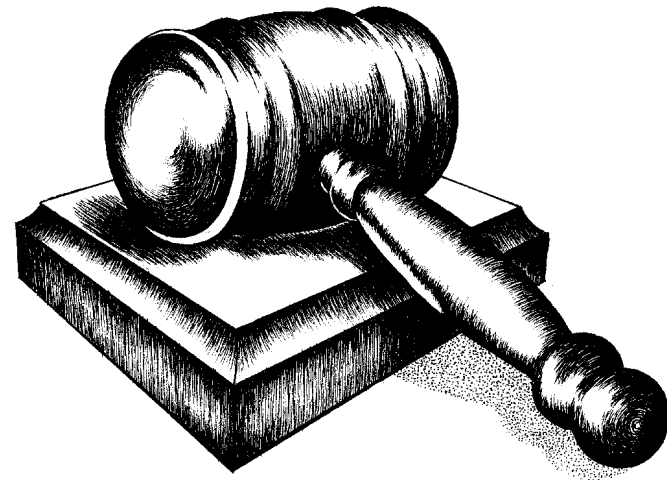
- Site History / Background
- Removal Activities
  - Removal of Buildings
  - Soil Excavation
  - T&D
- Air Monitoring / Sampling
- Community Outreach
- Questions?



# Site History & Background

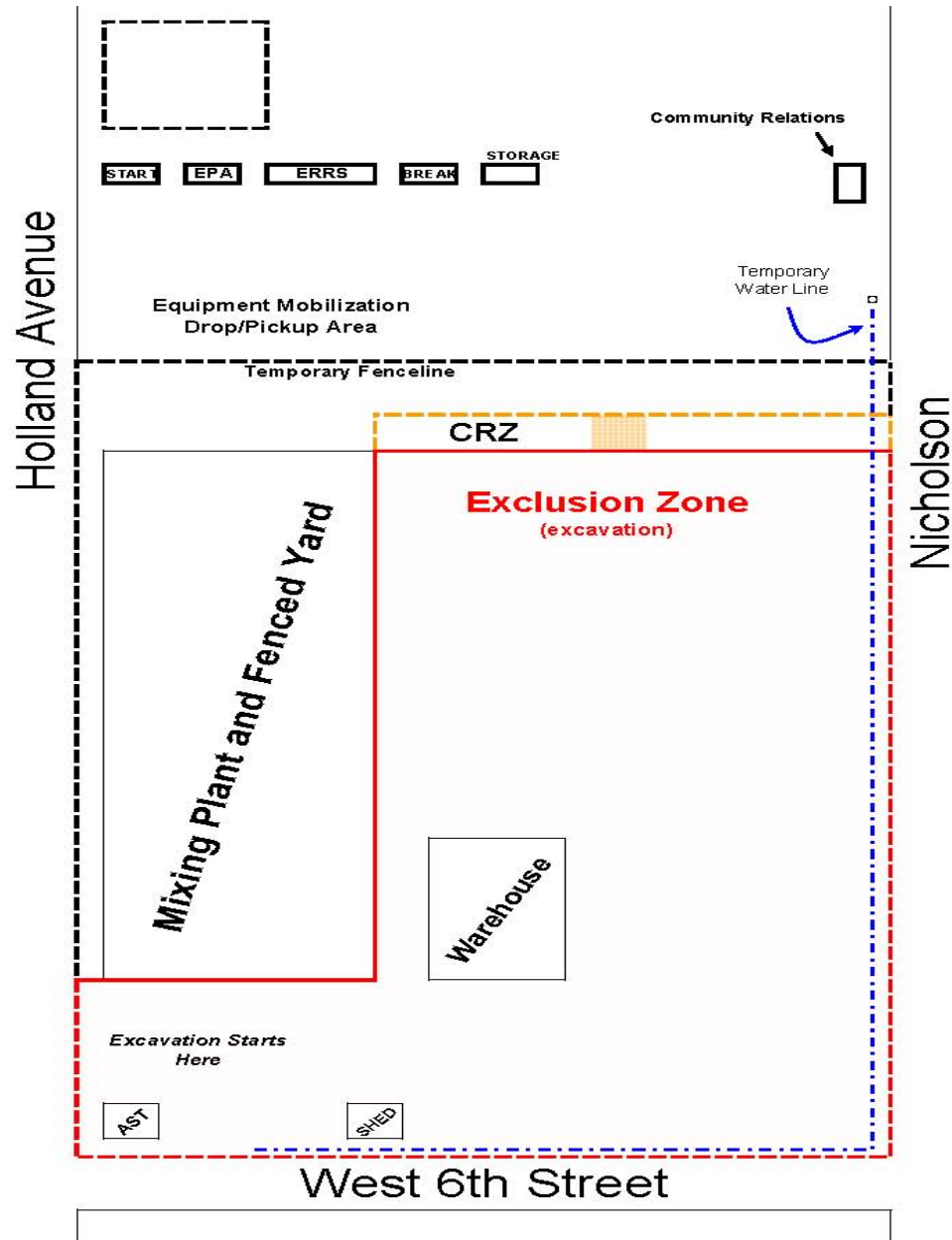
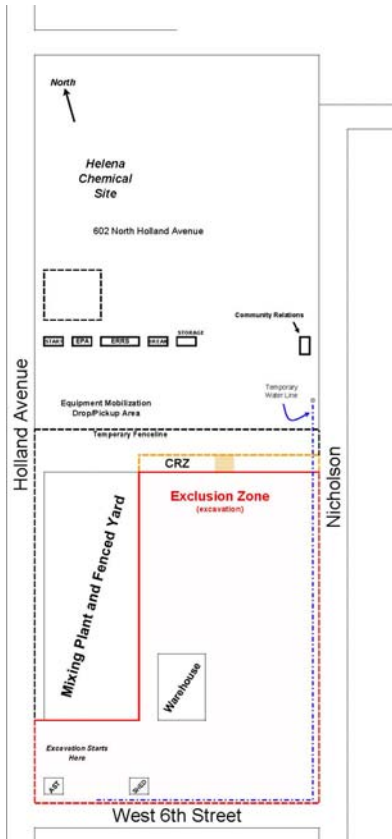
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- Helena Chemical Company (HCC) facility used for pesticide formulation from 1950 to 1972
- Soil samples collected in 1980 from site found elevated concentrations of pesticides
- Lawsuit filed in 1982 on behalf of the EPA against the two former owners
- 1982 the most highly contaminated soils on site were buried on site underneath a 7" caliche / asphalt cap
- In 2002 during a TCEQ remediation of the residential areas near the site they observed failures of the asphalt cap



# Site Map

- Three acre site
- Sectioned into grids





# Demolition Of Warehouse

- Pressure washed inside
- Metal sheets dismantled one at a time
- Metal frame dismantled a section at a time
- Goal was to prevent and suppress dust from the building



# Demolition Of Mixing Plant

- North and South Mixing Plant
- Unique structural wooded roof
- Environmental Building Sampling
  - Wood Chip Samples / Wipe Samples
    - ppb vs ug/sample
  - ATSDR Health Consult
    - testing inconclusive





# Demolition of AST's





# Dust Suppression Techniques

- Wind Screens
- Water Truck
- Water sprayed on excavated soil
- Trucks are covered before they leave the site





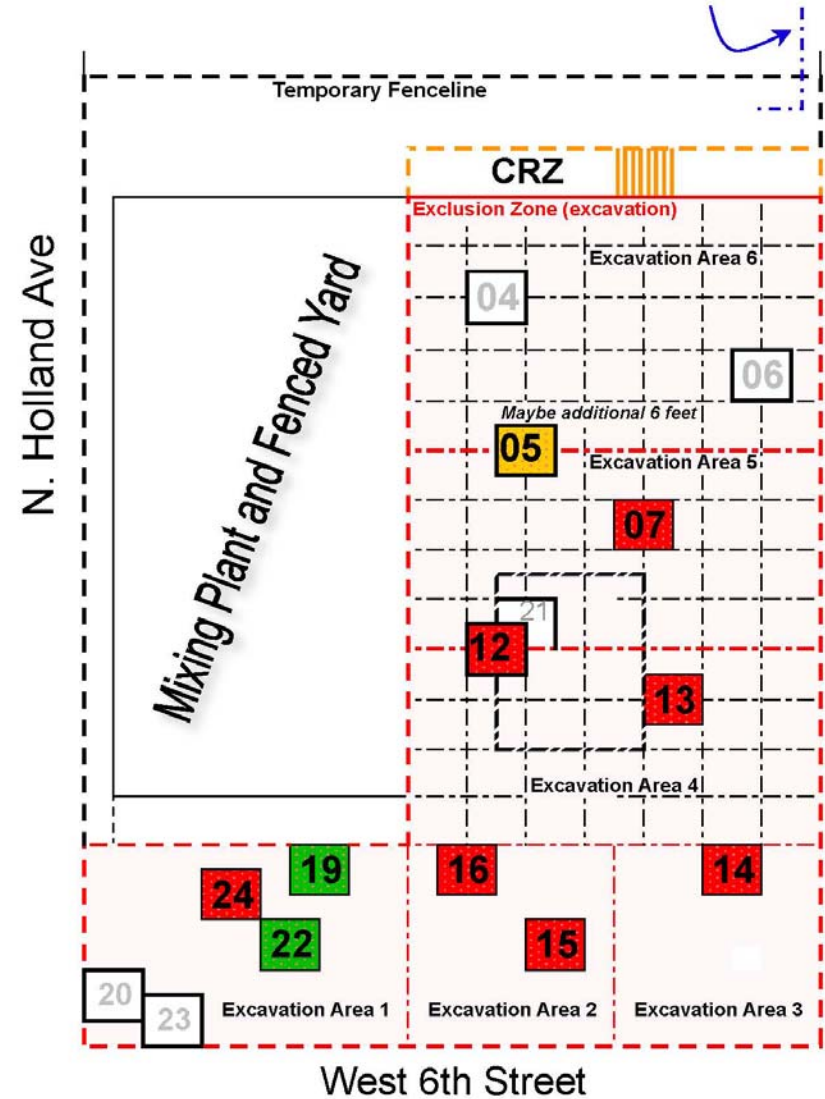
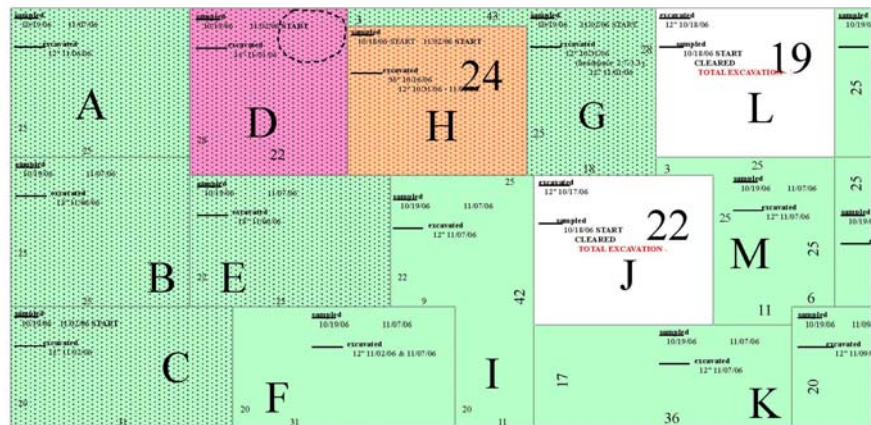
# Soil Excavation

- Soil excavation in small manageable grids
- Soil stockpiles wetted then covered
- Continuous air monitoring and sampling around site



# Soil Excavation

- Soil excavation divided into 6 Areas
- Soil excavation managed in small 25' grids
- Numbered grids indicate sampling data from site assessment
- How deep is too deep? Why do we care - \$500 / ton vs. \$25 / ton





# Transportation & Disposal

- Truck Wash
- Truck Route
- Disposal Options
  - Incineration
  - Treatment then Landfill
  - Landfill





# Disposal

- Haz. Soil & Debris
    - Halogenated Organics
      - Incineration - 4700 Tons
- Endrin > 0.02mg/L (DO12),  
Lindane > 0.4 mg/L (DO13),  
Chlorobenzene > 100.00mg/L (DO21)
- Contaminated Soil / Debris
    - Landfill - 13,490 Tons



- NonHaz Soil & Debris
- NonHaz WW
  - Deep Well Injection - 40k gal.



# Air Monitoring / Sampling

- Several locations
  - Pearson Elementary School
  - MCISD Transportation Facility
  - MCISD Maintenance Facility
  - On site and near soil stockpiles
  - Next to excavation





# Air Data and ESL

As of April 30, 2007 a total of

- 845 particulate and gaseous phase air samples,
- 182 confirmation of cleanup soil samples,
- 6 backfill source soil samples,
- 4 sludge/sediment samples, and
- 2 water samples

All pesticide particulate and vapors levels on-site and in the surrounding community have been below the site-specific action levels.



## United States Environmental Protection Agency AIR SAMPLING RESULTS TABLE Helena Chemical Superfund Removal Site CERCLIS # TXD980625008

To provide the public with a point of reference, EPA has compared the results to its Air Sampling to the State of Texas Effects Screening Levels.

### What are Effects Screening Levels (ESLs)?

Effects Screening Levels are used to evaluate the potential for effects to occur as a result of exposure to concentrations of constituents in the air. ESLs are based on data concerning health effects, the potential for odors to be a nuisance, effects on vegetation, and corrosive effects. They are not ambient air standards.

If predicted or measured airborne levels of a constituent do not exceed the screening level, adverse health or welfare effects are not expected. If ambient levels of constituents in air exceed the screening levels, it does not necessarily indicate a problem but rather triggers a review in more depth.

For more information please visit: [http://www.tceq.state.tx.us/implementation/tox/esl/list\\_main.html](http://www.tceq.state.tx.us/implementation/tox/esl/list_main.html)

This data was collected using a portable, battery-powered monitor that often is used in emergency response situations, because it gives immediate readings. EPA does not use data from these types of monitors either for compliance purposes or for generating routine air quality advisories.

Sample IDs with MCE = Analysis of Pesticides as Dust.

Sample IDs with PUF = Analysis of Pesticides as a Vapor.





# Air Monitoring



## United States Environmental Protection Agency AIR MONITORING RESULTS TABLE Helena Chemical Superfund Removal Site CERCLIS # TXD980625008

### Air Monitoring Results for 2/13/07. Approximate Run Time: 0900 - 1745

Helena Site Activity: Loading and shipping of waste to a disposal facility. Performing soil restoration on southern half of site.

Moderate above  $50 \mu\text{g}/\text{m}^3$  for a 24-hour period; unhealthy for sensitive groups above  $150 \mu\text{g}/\text{m}^3$  for a 24-hour period. (Note: sampling periods for these data were less than 24 hours.)

Location	ID	Average Mass (TWA) $\mu\text{g}/\text{m}^3$
Pearson Elementary School	1	44.1
Mission Cisd Transportation Yard	2	46.1
Mission Cisd Maintenance Yard	3	64.1
Corner of N Nicholson Ave and W 6 <sup>th</sup> St	4	21.3
NE On-Site	5	45.0
SE On-Site	6	47.1



## Agencia para la Protección Ambiental de los Estados Unidos (EPA)

### TABLA DE RESULTADOS DEL MONITOREO DEL AIRE El Sitio Superfondo de Remoción de Helena Chemical CERCLIS # TXD980625008

### Resultados del Monitoreo del Aire para for 2/13/07.

#### Tiempo Aproximado del Monitoreo: 0900 - 1745

Actividad en el Sitio de Helena: La carga y el despacho de desechos a un centro de eliminación. Realizando la restauración de suelos en la mitad meridional del sitio.

Moderado por encima de  $50 \mu\text{g}/\text{m}^3$  durante 24 horas; insalubre para grupos sensibles por encima de  $150 \mu\text{g}/\text{m}^3$  durante 24 horas. (Nota: Los periodos del muestreo para estos datos fueron menos de 24 horas).

Localización	ID	Tiempo Medio Másico $\mu\text{g}/\text{m}^3$
Escuela Primaria Pearson	1	44.1
Taller de Transporte de Mission Cisd	2	46.1
Taller de Mantenimiento de Mission Cisd	3	64.1
En la esquina de N. Nicholson Ave y W 6 <sup>th</sup> St	4	21.3
NE (en el sitio)	5	45.0
SE (en el sitio)	6	47.1

# Air Sampling

## Air Sampling Laboratory Results - 11/20/2006

**Helena Site Activity:** Loaded trucks with contaminated soil for off-site transportation and disposal and excavated/stockpiled contaminated soil from southwestern area of site.

**Approximate Sampling Time:** 0805 hrs - 1745 hrs

\*ST-ESL = Texas Short Term Effects Screening Level - short term indicates a one hour averaging period.

Location	Map ID	Sample ID	Target Analyte Found ( $\mu\text{g}/\text{m}^3$ )	Below Action Level ( $\mu\text{g}/\text{m}^3$ )? ST-ESL *
Pearson Elementary	1	MCE-112006-01	None	Yes
Pearson Elementary	1	PUF-112006-01	None	Yes
Mission Cisd Maintenance Yard	2	MCE-112006-02	None	Yes
Mission Cisd Maintenance Yard	2	PUF-112006-02	None	Yes
604 N. Nicholson Ave.	3	MCE-112006-03	None	Yes
604 N. Nicholson Ave.	3	PUF-112006-03	None	Yes
SE On-site	4	MCE-112006-04	Gamma-Chlordane 0.044	Yes < 5.0
SE On-site	4	PUF-112006-04	Alpha-BHC 0.088	Yes < 5.0
			Heptachlor 0.12	Yes < 0.5
SE On-site	4	MCE-112006-05	Alpha-BHC 0.13	Yes < 5.0
			4,4-DDT 0.046	Yes < 1.0
			Gamma-Chlordane 0.045	Yes < 5.0
SE On-site	4	PUF-112006-05	Alpha-BHC 0.045	Yes < 5.0
			Heptachlor 0.071	Yes < 0.5

### Sampled and Not Found:

4,4-DDD	Delta-BHC	Endrin	Methoxychlor
4,4-DDE	Dieldrin	Endrin Aldehyde	Toxaphene
Aldrin	Endosulfan I	Endrin Ketone	
Alpha-Chlordane	Endosulfan II	Gamma-BHC	
Beta-BHC	Endosulfan Sulfate	Heptachlor Epoxide	

**11/20/2006 SUMMARY:** All levels of analytes found are below screening levels. If the level of a constituent in the air exceeds the screening levels, it does not necessarily indicate a problem but rather triggers a more in-depth review.





# OSC.NET



## Helena Chemical Mission, TX - EPA Region VI



Site Contact:  
**William Rhotenberry**  
**Federal On-Scene Coordinator**  
[rhotenberry.william@epa.gov](mailto:rhotenberry.william@epa.gov)

[www.epaosc.net/helenachemicalmission](http://www.epaosc.net/helenachemicalmission)  
602 Holland Avenue  
Mission, TX 78572

Latitude: 26.2131  
Longitude: -98.3336

[site map](#) | [area map](#) | [weather](#) | [bookmark](#)

The Helena Chemical Company (HCC) facility located in Mission, Texas, was used for pesticide formulation from 1950 to 1972. The facility is located in a primarily residential neighborhood. The site was the subject of corrective action by USEPA in 1982. Deterioration of the asphalt containment cap raised concerns over potential health impacts. A site investigation was conducted in August 2005 and the decision was made to excavate and dispose of the contaminated soils at the site.

The Texas Commission on Environmental Quality (TCEQ) conducted cleanup activities on offsite properties in 2002 and 2003. That report and earlier investigative reports are included in the Documents section below.

## Helena Chemical

### Air Monitoring Results and Map for 3/11/08

posted: 3/14/2008

[http://www.epaosc.net/sites/862/files/air%20monitoring%20results%20table%20and%20map%20\\_03-11-08.pdf](http://www.epaosc.net/sites/862/files/air%20monitoring%20results%20table%20and%20map%20_03-11-08.pdf)

### Air Sampling Results and Map for 3/03/08

posted: 3/12/2008

[http://www.epaosc.net/sites/862/files/air%20sample%20results%20and%20map\\_03-03-08.pdf](http://www.epaosc.net/sites/862/files/air%20sample%20results%20and%20map_03-03-08.pdf)

### Air Monitoring Results and Map for 3/10/08

posted: 3/12/2008

[http://www.epaosc.net/sites/862/files/air%20monitoring%20results%20table%20and%20map%20\\_03-10-08.pdf](http://www.epaosc.net/sites/862/files/air%20monitoring%20results%20table%20and%20map%20_03-10-08.pdf)

### Air Sampling Results and Map for 2/27/08

posted: 3/11/2008

[http://www.epaosc.net/sites/862/files/air%20results%20and%20map\\_02-27-08.pdf](http://www.epaosc.net/sites/862/files/air%20results%20and%20map_02-27-08.pdf)

## Helena Chemical

<http://www.cdc.gov/niosh/topics/pesticides/>

National Institute for Occupational Safety and Health - Pesticide Illness & Injury Surveillance

<http://www.epa.gov/pesticides/>

U.S. Environmental Protection Agency - Office of Pesticide Programs

<http://www.cdc.gov/nas/docs/d001501-d001600/d001584/d001584s.html>

Los Centros para el Control y la Prevención de Enfermedades

<http://www.nlm.nih.gov/medlineplus/spanish/ency/article/002430.htm>

Enciclopedia médica en español

<http://www.nlm.nih.gov/medlineplus/spanish/pesticides.html>

MedlinePlus en español

<http://www.cdc.gov/nas/docs/d000101-d000200/d000104/d000104-s.html>

Manejando Pesticidas con Seguridad: Pasos a seguir para protegerse de los pesticidas

<http://www.envtox.ucdavis.edu/cehs/TOXINS/SPANISH2/Pesticides.htm>

Centro de Estudios de Sanidad Ambiental - UC Davis

<http://www.epa.gov/oppead1/safety/spanish/applicators/rules.htm>

Pesticidas: Salud y Seguridad

<http://www.epa.gov/espanol/>

la Agencia de Protección Ambiental de los Estados Unidos



# Community Outreach

- Monthly Fact Sheets
- Free for all public meetings
- Meetings with local residents, community activists, and nearby workers
- Senatorial and Congressional Interest



# Community Outreach Office

- Available three days per week
- Calendars available
- Current information on the site
- Additional information available
- Questions, suggestions, concerns can be addressed



# Contact Information

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- EPA Federal On Scene Coordinator
  - Valmichael Leos
  - [Leos.valmichael@epa.gov](mailto:Leos.valmichael@epa.gov)
- Community Involvement Coordinator
  - David Birdsong
  - Toll free 800.533.3508
  - [Birdsong.david@epa.gov](mailto:Birdsong.david@epa.gov)

